

**WIRING FAULT DETECTION, DIAGNOSIS AND REPORTING FOR
PROCESS CONTROL SYSTEMS**

ABSTRACT OF THE DISCLOSURE

A wiring fault detection, diagnostic and reporting technique enables linking devices within a process control system to measure the electrical characteristics of a segment protocol bus and the electrical characteristics of the signals transmitted via the protocol bus. The technique connects a signal line of a segment protocol bus to one of a plurality of measurement blocks within a wiring fault detection unit. The one of the plurality of measurement blocks measures an electrical characteristic associated with the segment protocol bus and sends the measured electrical characteristic to a wiring fault diagnostic manager. The wiring fault diagnostic manager analyzes the measured electrical characteristic to determine a type of the wiring fault and reports the type of the wiring fault via a user interface.